

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-30 (Cancelled)

Claim 31 (Currently amended) An organic-inorganic hybrid material comprising two phases:

- a first, mineral phase comprising a structured mesoporous network with open porosity, wherein the structured mesoporous network exhibits an organized structure with a repeating unit; and
- a second, organic phase comprising an organic polymer, said organic phase not participating in creating the structured mesoporous network of the mineral phase and being essentially not present inside the pores of the structured mesoporous network ~~structure~~ of the mineral phase.

Claim 32 (Previously presented) The material of claim 31, further comprising a third phase, inside the pores, composed of at least one surface active agent.

Claim 33 (Previously presented) The material of claim 31, wherein the mineral phase and the organic phase are continuous and intermingled.

Claim 34 (Previously presented) The material of claim 31, wherein the mineral phase is discontinuous and dispersed in the organic phase, which is continuous.

Claim 35 (Previously presented) The material of claim 31, wherein the mineral phase has conductive and/or hydrophilic functions on the surfaces of its pores.

Claim 36 (Previously presented) The material of claim 31, wherein the organic phase has conductive and/or hydrophilic functions.

Claim 37 (Previously presented) The material of claim 35, further comprising a third phase, inside the pores, composed of at least one surface active agent, wherein the third phase has conductive and/or hydrophilic functions.

Claim 38 (Previously presented) The material of claim 35, wherein said conductive functions are selected from cation exchange groups.

Claim 39 (Previously presented) The material of claim 38, wherein said cation exchange groups are selected from the following groups:  $\text{SO}_3\text{M}$ ;  $-\text{PO}_3\text{M}_2$ ;  $-\text{COOM}$  and  $\text{B}(\text{OM})_2$ , where M represents hydrogen, a monovalent metal cation, or  $^+\text{NR}^1_4$ , where each  $\text{R}^1$ , independently, represents a hydrogen, an alkyl radical or an aryl radical.

Claim 40 (Previously presented) The material of claim 35, wherein said conductive functions are selected from anion exchange groups.

Claim 41 (Previously presented) The material of claim 40, wherein said anion exchange groups are selected from the following groups: pyridyl, imidazolyl, pyrazolyl; triazolyl; the radicals of formula  $^-\text{NR}^2_3\text{X}$ , where X represents F, Cl, Br, I,  $\text{NO}_3$ ,  $\text{SO}_4\text{H}$  or OR, R being an alkyl radical or an aryl radical, and where each  $\text{R}^2$ , independently, represents a hydrogen, an alkyl radical or an aryl radical; and the basic aromatic or nonaromatic radicals containing at least one radical selected from imidazole, vinylimidazole, pyrazole, oxazole, carbazole, indole, isoindole, dihydrooxazole, isoxazole, thiazole, benzothiazole, isothiazole, benzimidazole, indazole, 4,5-dihydropyrazole, 1,2,3-oxadiazole, furazan, 1,2,3-thiadiazole, 1,2,4-thiadiazole, 1,2,3-benzotriazole, 1,2,4-triazole, tetrazole, pyrrole, aniline, pyrrolidine, and pyrazole radicals.

Claim 42 (Previously presented) The material of claim 31, wherein the mineral phase is composed of at least one oxide selected from metal oxides, metalloid oxides and mixed oxides thereof.

Claim 43 (Previously presented) The material of claim 42, wherein said oxide is selected from the oxides of silicon, titanium, zirconium, hafnium, aluminum, tantalum, tin, rare earths and mixed oxides thereof.

Claim 44 (Previously presented) The material of claim 31, wherein the mesoporous network has an organized structure with a repeating unit.

Claim 45 (Previously presented) The material of claim 44, wherein the mesoporous network has a cubic, hexagonal, lamellar, vermicular, vesicular or bicontinuous structure.

Claim 46 (Previously presented) The material of claim 31, wherein the size of the pores is from 1 to 100 nm.

Claim 47 (Previously presented) The material of claim 31, wherein the organic polymer is a thermally stable polymer.

Claim 48 (Previously presented) The material of claim 47, wherein the organic polymer is selected from polyetherketones; polysulfones; polyethersulfones; polyphenylethersulfones; styrene/ethylene, styrene/butadiene, and styrene/isoprene copolymers; polyphenylenes; polyimidazoles; polyimides; polyamideimides; polyanilines; polypyrroles; polysulfonamides; polypyrazoles; polyoxazoles; polyethers; poly((meth)acrylic acid)s; polyacrylamides; polyvinyls; acetal resins; polyvinylpyridines; polyvinylpyrrolidones; polyolefins; poly(styrene oxide)s; fluoro resins and polyperfluorocarbons; poly(vinylidene fluoride)s; polychlorotrifluoroethylenes; polyhexafluoropropenes; perfluoroalkoxides; polyphosphazenes; silicone elastomers; and block copolymers comprising at least one block composed of a polymer selected from the above polymers.

Claim 49 (Previously presented) The material of claim 32, wherein the surface active agent is selected from: alkyltrimethylammonium salts, alkyl phosphate salts and alkylsulfonate salts; dibenzoyltartaric acid, maleic acid or long-chain fatty acids; urea or long-chain amines; phospholipids; doubly hydrophilic copolymers whose amphiphilicity is generated in situ by interaction with a substrate; and amphiphilic multiblock copolymers comprising at least one hydrophobic block in combination with at least one hydrophilic block.

Claims 50-60 (Cancelled)

Claim 61 (Previously presented) The material of claim 36, further comprising a third phase, inside the pores, composed of at least one surface active agent, wherein the third phase has conductive and/or hydrophilic functions.

Claim 62 (Previously presented) The material of claim 36, wherein said conductive functions are selected from cation exchange groups.

Claims 63-65 (Cancelled)

Claim 66 (Previously presented) The material of claim 42, wherein said oxide is selected from the oxides of europium, cerium, lanthanum, and gadolinium, and mixed oxides thereof.

Claim 67 (Previously presented) The material of claim 31, wherein the size of the pores is from 1 to 50 nm.